

CLAIMS

WHAT IS CLAIMED IS:

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A1 1. A telephone user interface (TUI) comprising:
a first command mode for receiving a first command
signal in association with an option of a first menu structure of options,
said first command mode having an active or inactive status;
a second command mode for receiving a second
10 command signal in association with an option of a second menu structure
of options, said second command mode having an active or inactive status,
said options of said first menu structure logically associated with said
options of said second menu structure; and
a command mode switch, functionally connected to
15 said first and second command modes and responsive to said first and
second command signals, for toggling between said first command mode
and said second command mode by switching one of said first command
mode and said second command mode from said active status to said
inactive status and by switching the remaining one of said first command
20 mode and said second command mode from said inactive status to said
active status.

2. The TUI of Claim 1 wherein said first and second
command modes are voice-based and tone-based command modes,
25 respectively.

3. The TUI of Claim 1 wherein each of said first
command mode and said second command mode comprises a menu
structure of command options, said switch operative to select a
30 predetermined one of said command options for the one of said first and
second command modes transitioning to active status in response to
toggling between said command modes.

4. The TUI of Claim 3 wherein said predetermined
35 command option is the option of said menu structure for the one of said
command modes transitioning to inactive status.

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5. The TUI of Claim 3 wherein said first command mode is set to said active status and said second command mode is set to said inactive status in response to toggling between said command modes.

5 6. The TUI of Claim 3 wherein said second command mode is set to said active status and said first command mode is set to said inactive status in response to toggling between said command modes.

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7. A telephone user interface (TUI) comprising:
a voice-based command mode for receiving a vocalized
command signal in association with a voice option of a menu structure of
voice options, said voice-based command mode having an active or
inactive status;

a tone-based command mode for receiving a tonal command signal in association with a tone option of a menu structure of tone options, said tone based command mode having an active or inactive status, said voice options logically associated with said tone options; and

10 a command mode switch, functionally connected to
said voice-based and tone-based command modes and responsive to said
vocalized and tonal command signals, for toggling between said voice-
based command mode and said tone-based command mode by switching
one of said voice-based command mode and said tone-based command
15 mode from said active status to said inactive status and by switching the
remaining one of said voice-based command mode and said tone-based
command mode from said inactive status to said active status.

20 8. The TUI of Claim 7 wherein each of said voice-based command mode and said tone-based command mode comprises a menu structure of command options, said switch operative to select a predetermined one of said command options for the one of said voice-based and tone-based command modes transitioning to active status in response to toggling between said command modes.

25 9. The TUI of Claim 8 wherein said predetermined
command option is the option of said menu structure for the one of said
command modes transitioning to inactive status.

30 10. The TUI of Claim 7 wherein said voice-based
command mode is set to said active status and said tone-based command
mode is set to said inactive status in response to toggling between said
command modes.

11. The TUI of Claim 7 wherein said tone-based command mode is set to said active status and said voice-based command mode is set to said inactive status in response to toggling between said command modes.

12. In a telephone user interface (TUI) comprising a tone-based command mode having a menu structure of tone options and a voice-based command mode having a menu structure of voice options, wherein the tone options correspond to the voice options, a method for toggling among said tone-based and voice-based command modes, said method comprising the steps of:

- a. operating the TUI in a selected command mode;
- b. in response to receiving a command signal, activating the non-selected one of said tone-based and said voice-based command modes and disabling said selected command mode;
- c. operating the TUI in said non-selected command mode.

13. The method of Claim 12 wherein said selected command mode is set to a default command mode.

14. The method of Claim 12 wherein said selected command mode is selected by a user command.

15. The method of Claim 12 wherein activating the non-selected command mode comprises:

in the event that said non-selected command mode is said voice-based command mode, then selecting a predetermined one of the voice options for operation by the TUI;

otherwise, selecting a predetermined one of the tone options for operation by the TUI.

16. The method of Claim 15 wherein in the event that a predetermined one of the voice options is selected for operating by the TUI, the predetermined voice option corresponds to one of the tone-based options formerly operated by the TUI when said selected command mode was activated.

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17. The method of Claim 15 wherein in the event that a predetermined one of the tone options is selected for operation by the TUI, the predetermined tone option corresponds to one of the voice-based options formerly operated by the TUI when said selected command mode was activated.

18. The method of Claim 12 wherein said selected command mode comprises said tone-based command mode and said non-selected command mode comprises said voice-based command mode.

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19. The method of Claim 18 wherein said command signal is a DTMF tonal command.

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20. The method of Claim 18 wherein said command signal is a voice command.

21. The method of Claim 12 wherein the selected command mode is said voice-based command mode and said non-selected command mode is said tone-based command mode.

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22. The method of Claim 21 wherein said command signal is a voice command.

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23. The method of Claim 21 wherein said command signal is a DTMF tonal command.

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24. The method of Claim 12 wherein in response to receiving said command signal, said selected command mode is interrupted, said non-selected command mode is activated in place of said first command mode, and one of said options of said non-selected command mode is performed.

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25. A computer-readable medium on which is stored a computer program for controlling a telephone user interface (TUI) comprising at least two command modes, each of said command modes adapted to having operation interrupted by toggling among said command modes, said computer program further comprising a database having control options for each of said command modes, each said control option of one of said command modes correlated to one of said control options of the other command mode, and said computer program comprising instructions which, when executed by a computer, perform the steps of:

10 a. operating said TUI in a first one of said
command modes;

b. interrupting said first command mode in response to receiving a command signal to implement another of said command modes; and

15 c. in response to receiving said command signal, activating a second one of said command modes associated with said command signal.

26. The computer-readable medium of Claim 25 further comprising the step of operating said TUI in said second command mode in response to activating said second command mode.

27. The computer-readable medium of Claim 25 further comprising the step of activating one of said command modes as a default command mode when failing to receive said command signal to activate said first command mode.

28. In an integrated computer telephony system providing a telephone user interface (TUI), said TUI having a pair of command modes, a method for toggling between said command modes, comprising the steps of:

- 5 a. activating a first one of said command modes to control said TUI;
- b. interrupting said first command mode in response to receiving a command signal to activate a second one of said command modes; and
- 10 c. in response to interrupting said first command mode, activating said second command mode associated with said command signal in place of said first command mode.

15 29. The method of Claim 28 further comprising the steps of receiving a subsequent command signal and activating said first command mode in place of said second command mode.

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30. In a program module operating within a telecommunications system and having access to a TUI, said TUI having a pair of command modes for controlling said TUI and providing a plurality of options to be implemented through the telecommunications system, a 5 method for controlling said command modes, comprising the steps of:

implementing one of the said command modes to initially control said TUI; and

10 toggling, by said TUI, of said command modes, wherein said toggling is initiated by interrupting the operation of one of said command modes while one of said command modes is controlling said TUI, activating the other of said command modes, and resuming 15 control of said TUI while in the other of said command modes.

31. The program module of Claim 30 wherein a tone-based 15 command mode is initially controlling said TUI, said tone-based command mode is interrupted, and a voice-based command mode is activated in place of said tone-based command mode.

32. The program module of Claim 31 wherein said voice-based command mode is interrupted and said tone-based command mode is activated to control said TUI in place of said voice-based command mode.

33. The program module of Claim 32 wherein said voice-based command mode is interrupted by transmitting tonal command signals into said TUI.

34. The program module of Claim 31 wherein said tone-based command mode is interrupted by transmitting voice command signals into said TUI.

35. The program module of Claim 30 wherein a voice-based command mode is initially controlling said TUI, said voice-based command mode is interrupted, and a tone-based command mode is activated in place of said voice-based command mode.

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36. The program module of Claim 35 wherein said tone-based command mode is interrupted and said voice-based command mode is activated to control said TUI in place of said tone-based command mode.

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37. The program module of Claim 36 wherein said tone-based command mode is interrupted by transmitting vocalized command signals into said TUI.

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38. The program module of Claim 35 wherein said voice-based command mode is interrupted by transmitting tonal command signals into said TUI.

39. A computer system for toggling command modes of a telephone user interface (TUI) having a first command mode and a second command mode, said computer system comprising:

5 a processing unit;

5 a memory storage device operative to store a program implementing said TUI; and

an interface device coupled to said processing unit for receiving a call,

10 said processing unit responsive to instructions in said

10 program and being operative to:

prompt for a command signal;

15 activate said first command mode associated with said command signal;

control said TUI while in said first command mode;

15 interrupt said first command mode in response to receiving a subsequent command signal to activate said second command mode associated with said subsequent command signal in place of said first command mode; and

20 resume operation of said TUI by utilizing said second command mode.

40. The method of Claim 39 wherein said processing unit is further operative to:

25 interrupt said second command mode in response to

receiving said command signal to activate said first command mode in place of said second command mode.

41. The method of Claim 40 wherein said processing unit is further operative to:

30 interrupt said first command mode in response to receiving said subsequent command signal to activate said second command mode in place of said first command mode.

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